SIEMENS

Data sheet 6ES7647-0JB00-0YA2

SIMATIC IPC520A; Nvidia ARM Carmel (6C); 8 GB RAM, Jetson NX; 4x Ethernet RJ45, 3x USB3.0; 16 GB eMMC; without mounting accessories without accessories

General information	
Product type designation	IPC520A
Installation type/mounting	
Mounting	rail mounting, wall mounting, desk mounting
Design	Box PC, built-in unit
Supply voltage	
Type of supply voltage	24 V DC
Mains buffering	
● Mains/voltage failure stored energy time	5 ms
Processor	
Processor type	NVIDIA Carmel ARM ® v8.2 64-bit CPU, 2x @ 1.5 GHz, 4x @ 1.2 GHz
Graphic	
Graphics controller	384-core NVIDIA Volta™ GPU with 48 Tensor Cores @ 800 MHz
Drives	
SSD	Yes; 16 GB eMMc
Memory	
Type of memory	LPDDR4
Main memory	8 GB RAM
Hardware configuration	
Slots	
● free slots	1x nano SIM card slot
Digital inputs	
Number of digital inputs	4
Input voltage	
● Type of input voltage	24 V DC
● for signal "0"	< 5 V DC
● for signal "1"	> 12 V DC
Input current	
● for signal "0", max. (permissible quiescent current)	1 mA
● for signal "1", typ.	2.5 mA
Digital outputs	
Type of digital output	transistor
Number of digital outputs	2
Short-circuit protection	No
Output voltage	
● Type of output voltage	DC
● permissible voltage at output, min.	20.4 V
● permissible voltage at output, max.	28.8 V
Output current	
● for signal "1" rated value	0.5 A

Switching frequency	
● with resistive load, max.	10 Hz
● with inductive load, max.	0.5 Hz
● mechanical, max.	10 Hz
Interfaces	
Number of industrial Ethernet interfaces	4; 4x RJ45 (2x support PoE PSE IEEE 802.3af 15 W)
USB port	3x USB 3.0, 1x USB 2.0
Connection for keyboard/mouse	USB / USB
serial interface	1x COM (1x RS 232 / 422 / 485)
Video interfaces	
● Graphics interface	1x DisplayPort
Industrial Ethernet	
● Industrial Ethernet interface	4x Ethernet (RJ45)
— 100 Mbps	Yes
— 1000 Mbps	Yes
Protocols	
Protocols (Ethernet)	
● TCP/IP	Yes
Integrated Functions	
Monitoring functions	
● Temperature monitoring	Yes
● Watchdog	Yes
● Status LEDs	1x Power, 1x User, 6x DIO
● Fan	No
EMC	
Interference immunity against discharge of static electricity	
● Interference immunity against discharge of static electricity	±6 kV contact discharge acc. to IEC 61000-4-2; ±8 kV air discharge acc. to IEC 61000-4-2
Interference immunity against high-frequency electromagnetic fields	
● Interference immunity against high frequency radiation	10 V/m for 80 - 1 000 MHz and 1.4 - 2 GHz, 80% AM acc. to IEC 61000-4-3; 3 V/m for 2 - 2.7 GHz, 80% AM acc. to IEC 61000-4-3; 10 V for 10 kHz - 80 MHz, 80% AM acc. to IEC 61000-4-6
Interference immunity to cable-borne interference	
● Interference immunity on supply cables	±2 kV (according to IEC 61000-4-4, burst); ±1 kV (according to IEC 61000-4-5, surge pulse/line to line); ±2 kV (according to IEC 61000-4-5, surge pulse/line to ground)
● Interference immunity on signal cables >30m	±2 kV acc. to IEC 61000-4-4, burst; ±2 kV acc. to IEC 61000-4-5, surge
● Interference immunity on signal cables < 30m	±1 kV (5 kHz/100 kHz) acc. to IEC 61000-4-4; burst; length < 30 m; ±2 kV (5 kHz/100 kHz) acc. to IEC 61000-4-4; burst; length > 30 m
Interference immunity to magnetic fields	
● Interference immunity to magnetic fields at 50 Hz	100 A/m; to IEC 61000-4-8
Emission of conducted and non-conducted interference	
● Interference emission via line/AC current cables	EN 61000-6-4:2007 +A1:2011 (industrial environments), EN 61000-6-3:2007 +A1:2011 (residential environments), CISPR 22 Class B, FCC Class A
Degree and class of protection	
IP degree of protection	IP20
Standards, approvals, certificates	
CE mark	Yes
CSA approval	No; in preperation
UL approval	Yes
cULus	Yes; UL 61010-1, UL 61010-2-201
FM approval	in preperation
RCM (formerly C-TICK)	Yes; C-Tick
KC approval	Yes; Reg. No.:R-R-S53-IPC520A
EAC (formerly Gost-R)	Yes; EAC
FCC	Yes
BSMI	in preperation
Ambient conditions	
Ambient temperature during operation	
● min.	0 °C
● max.	45 °C
Ambient temperature during storage/transportation	

● min.	-20 °C
● max.	70 °C
Relative humidity	
● Relative humidity	5 ... 85 % at 30 °C, no condensation
Vibrations	
● Vibration resistance during operation acc. to IEC 60068-2-6	Tested according to IEC 60068-2-6: 5 Hz to 8.4 Hz: 3.5 mm, 8.4 Hz to 500 Hz: 9.8 m/s²
Shock testing	
● Shock load during operation	Tested according to IEC 60068-2-27: 150 m/s², 11 ms
Operating systems	
pre-installed operating system	No
Dimensions	
Width	234 mm
Height	129 mm
Depth	71 mm

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